

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)									DATE February 2003	
BUDGET ACTIVITY 05 - System Development and Demonstration (SDD)					PE NUMBER AND TITLE 0604270F EW Development					
COST (\$ in Thousands)	FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
Total Program Element (PE) Cost	43,838	67,226	74,034	42,554	35,894	181,631	139,728	105,497	Continuing	TBD
1011 Joint Service Electronic Combat Systems Tester	2,521	2,796	0	0	0	0	0	0	0	48,434
2462 Compass Call (CC)	0	0	0	0	0	0	0	0	0	66,037
3891 Advanced IR Counter Measures (AIRCМ)	991	9,492	5,453	3,094	3,128	3,166	3,200	3,278	Continuing	TBD
3945 TEWS Upgrade	33,660	29,550	42,149	39,460	32,766	33,330	30,932	31,341	Continuing	TBD
4832 Precision Location and Identification (PLAID)	5,329	20,088	0	0	0	0	0	0	0	52,966
8462 Airborne Electronic Attack	1,337	5,300	26,432	0	0	145,135	105,596	70,878	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0	0
<p>BPAC 653891 (AIRCМ) includes three subprojects: Loitering EW Killer (LEWK) ACTD, Advanced Strategic and Tactical Infrared Expendables (ASTE), and software upgrades to the passive UV missile warner, the AAR-47. BPAC 658462 (MALD) has been expanded and renamed Airborne Electronic Attack (AEA). BPAC 658462 includes the Air Force AEA initiatives to develop electronic attack capabilities in support of Air Force, Joint, and Global Strike Task Force operations. In FY2003, BPAC 653945 RF Towed Decoy Systems, was renamed TEWS Upgrade.</p> <p>(U) <u>A. Mission Description</u></p> <p>This program element (PE) consolidates engineering development efforts related to Air Force Electronic Warfare (EW) requirements and counter air defense requirements. It centralizes USAF funding and management of common EW systems development. These funds transition EW technologies to an installed operational capability. This PE executes projects to provide capabilities to avoid or degrade enemy acquisition, tracking and attack of DoD operational platforms. These projects include electro-optical (EO), infrared (IR), radio frequency (RF) and laser situational awareness and self protection systems, command and control warfare (C2W) electronic attack systems, and the test equipment needed to support them.</p>										

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)

DATE

February 2003

BUDGET ACTIVITY

05 - System Development and Demonstration (SDD)

PE NUMBER AND TITLE

0604270F EW Development(U) **B. Budget Activity Justification**

A key criterion for the included projects in this program element is the need for engineering and manufacturing developmental activities, therefore these programs are in Budget Activity 5 - System Demonstration and Engineering Development (SDD).

(U) **C. Program Change Summary (\$ in Thousands)**

	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>Total Cost</u>
(U) Previous President's Budget	42,546	65,082	57,856	TBD
(U) Appropriated Value	42,967	69,582		
(U) Adjustments to Appropriated Value				
a. Congressional/General Reductions	-421	-736		
b. Small Business Innovative Research	-331			
c. Omnibus or Other Above Threshold Reprogram	0	-1,620		
d. Below Threshold Reprogram	1,837			
e. Rescissions	-214			
(U) Adjustments to Budget Years Since FY 2003 PBR	0	0	16,178	
(U) Current Budget Submit/FY 2004 PBR	43,838	67,226	74,034	TBD

(U) **Significant Program Changes:**

FY2003 Project 65011, JSECST, moved \$1.1M from TEWS Upgrade to payback funds given up in FY02 for PBL program.

FY2003 Project 653891, AIRCM, subproject LEWK received Congressional plus-up of \$3.2M; database correction (all years) that moved subproject AAR-47 from TEWS Upgrade to AIRCM; \$1.5M moved from TEWS Upgrade to continue Comet testing.

FY2003 Project 653945, TEWS Upgrade, received Congressional reduction of \$8.7M; \$1.1M moved to JSECST; \$1.5M moved to AIRCM for Comet testing; database correction (all years) moved AAR-47 from TEWS Upgrade to AIRCM. FY2004, \$9.2M moved to MALD.

FY2003 Project 654832, PLAID, received Congressional plus-up of \$10M.

FY2002 added \$1.3M to conduct studies. FY2004 Project 658462, AEA, \$26.4M increase to MALD for SDD (\$9.2M from TEWS; \$10M from ALE-50 production; \$7.8M other AF reprogramming).

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE

February 2003

BUDGET ACTIVITY

05 - System Development and Demonstration (SDD)

PE NUMBER AND TITLE

0604270F EW Development

PROJECT

1011

COST (\$ in Thousands)	FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
1011 Joint Service Electronic Combat Systems Tester	2,521	2,796	0	0	0	0	0	0	0	48,434

(U) **A. Mission Description**

The Joint Service Electronic Combat Systems Tester (JSECST) fills a combined Air Force and Navy operational requirement for a small, adaptable, and highly mobile tester capable of verifying system level performance of installed electronic countermeasures systems. JSECST provides an organizational-level flight line capability for verifying operational status of aircraft-installed electronic combat (EC) systems including Group A antennas and transmission lines. JSECST will fill a void in current Air Force end-to-end test capability. The JSECST system consists of core test sets (CTS), nomenclature AN/USM-670, test program sets (TPS), and software development stations (SDS). The CTS provides the stimulus, measurement, operator-interface, analysis and control functions common across all applications. The TPSs provide aircraft specific hardware interfaces and software packages to employ the CTS. The SDS provides computer resources for developing and maintaining CTS and TPS software. Initial TPS will support the F-15C. The Follow-on Test Program Set (FOTPS) program will design, develop, assemble, integrate, test, and deliver TPSs for use with the CTS for additional aircraft. The follow-on Air Force platforms include the F-15E, F-16 (Blocks 25/30/32/40/42/50/52), and OA/A-10. Navy platforms include the AV-8B, F/A-18 A/B and the F-14 B/D. (Navy platforms will be funded by the Navy.) JSECST is intended to meet the organizational level support equipment requirements of electronic combat systems for service through a 20-year life cycle. Deliveries begin in FY03 for initial platforms and will continue through FY05 for follow-on platforms. SDD continues for follow-on platforms at the same time as systems are delivered for initial platforms.

(U) **FY 2002 (\$ in Thousands)**

(U) \$0	Accomplishments / Planned Program
(U) \$1,760	Continue FOTPS Contract
(U) \$324	Continue SPO Support
(U) \$200	Continue Government Test
(U) \$237	Continue TPS Lab Support
(U) \$2,521	Total

(U) **FY 2003 (\$ in Thousands)**

(U) \$0	Accomplishments / Planned Program
(U) \$1,635	Continue FOTPS Contract
(U) \$500	Development of Performance Based Logistics (PBL) Program
(U) \$390	Continue SPO Support
(U) \$169	Continue Government Test

Project 1011

Page 3 of 28 Pages

Exhibit R-2A (PE 0604270F)

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE

February 2003

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

05 - System Development and Demonstration (SDD)

0604270F EW Development

1011

(U) **A. Mission Description Continued**(U) FY 2003 (\$ in Thousands) Continued

(U) \$102 Continue TPS Lab Support

(U) \$2,796 Total

(U) FY 2004 (\$ in Thousands)

(U) \$0 Accomplishments / Planned Program

(U) \$0 Total

(U) **B. Project Change Summary**

\$1.1M reprogrammed in FY 03 for payback of funding given up in FY02 and for developmental cost for PBL program.

FY03 efforts will continue into FY04 using FY03 funds.

(U) **C. Other Program Funding Summary (\$ in Thousands)**

	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Complete</u>	
(U) AF RDT&E										
(U) Other APPN										
(U) Aircraft Procurement, AF PE	24,072	5,400	0	0	0	0			0	29,472
27442F (Common ECM										
Equipment), In Service										
Direct Ground Support										
Equipment										
(U) Initial Spares	151	313	0	0	0	0			0	464
(U) Total Aircraft Procurement,	24,223	5,713	0	0	0	0			0	29,936
AF										

(U) **D. Acquisition Strategy**

The acquisition strategy is competitive, cost-plus contracts for CTS development. FOTPS acquisition strategy is a sole source, cost-plus contract. Production and support contract is sole source.

Project 1011

Page 4 of 28 Pages

Exhibit R-2A (PE 0604270F)

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE

February 2003

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

05 - System Development and Demonstration (SDD)

0604270F EW Development

1011

(U) E. Schedule Profile

<u>FY 2002</u>				<u>FY 2003</u>				<u>FY 2004</u>			
1	2	3	4	1	2	3	4	1	2	3	4
		*									
						X					
									X		

(U) CTS Production Lot 2 award

(U) CTS Production Lot 3 award

(U) Complete FOTPS Development

* - Denotes a completed event

X - Denotes a planned event

- Slippage in core Test Sets for SDD were not available as planned causing a four month slip.

UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)								DATE February 2003		
BUDGET ACTIVITY					PE NUMBER AND TITLE				PROJECT	
05 - System Development and Demonstration (SDD)					0604270F EW Development				1011	
(U) <u>A. Project Cost Breakdown (\$ in Thousands)</u>										
					FY 2002		FY 2003		FY 2004	
(U)	FOTPS Contracts				1,760		1,635			
(U)	Development of Performance Based Logisitics (PBL) Program				0		500			
(U)	SPO Support				324		390			
(U)	Government Test				200		169			
(U)	FOTPS Lab Support				237		102			
(U)	Total				2,521		2,796			
(U) <u>B. Budget Acquisition History and Planning Information (\$ in Thousands)</u>										
(U) <u>Performing Organizations:</u>										
<u>Contractor or</u>	<u>Contract</u>									
<u>Government</u>	<u>Method/Type</u>	<u>Award or</u>	<u>Performing</u>	<u>Project</u>						
<u>Performing</u>	<u>or Funding</u>	<u>Obligation</u>	<u>Activity</u>	<u>Office</u>	<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>	<u>Total</u>
<u>Activity</u>	<u>Vehicle</u>	<u>Date</u>	<u>EAC</u>	<u>EAC</u>	<u>to FY 2002</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>Complete</u>	<u>Program</u>
<u>Product Development Organizations</u>										
AAI	CPAF	Mar 96	28,340	28,340	26,922				0	26,922
FO TPS AAI	CPIF	Jun 00	6,325	6,325	2,933	1,760	1,635		0	6,328
<u>Support and Management Organizations</u>										
Performance Based Logistcs							500			500
ASC/SMNT, NAVAIR,		Various			11,753	324	390		0	12,467
Wright Labs										
<u>Test and Evaluation Organizations</u>										
53 EWG, 46 TW, Eglin AFB					1,509	437	271		0	2,217
FL										
Project 1011										
Page 6 of 28 Pages										
Exhibit R-3 (PE 0604270F)										

UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)					DATE February 2003		
BUDGET ACTIVITY		PE NUMBER AND TITLE				PROJECT	
05 - System Development and Demonstration (SDD)		0604270F EW Development				1011	
		<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>	<u>Total</u>
<u>Subtotals</u>		<u>to FY 2002</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>Complete</u>	<u>Program</u>
Subtotal Product Development		29,855	1,760	1,635		0	33,250
Subtotal Support and Management		11,753	324	890		0	12,967
Subtotal Test and Evaluation		1,509	437	271		0	2,217
Total Project		43,117	2,521	2,796		0	48,434

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)									DATE February 2003	
BUDGET ACTIVITY 05 - System Development and Demonstration (SDD)					PE NUMBER AND TITLE 0604270F EW Development				PROJECT 3891	
COST (\$ in Thousands)	FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
3891 Advanced IR Counter Measures (AIRCМ)	991	9,492	5,453	3,094	3,128	3,166	3,200	3,278	Continuing	TBD
<p>*Advanced Infrared Countermeasures (AIRCМ) now includes three subprojects: Advanced Strategic and Tactical IR Expendables (ASTE), software development to AAR-47, and Loitering Electronic Warfare Killer (LEWK) Advanced Concept Technology Development (ACTD).</p> <p>(U) <u>A. Mission Description</u></p> <p>The Advanced IR Countermeasure (AIRCМ) project contains related aircraft self-protection efforts aimed at increasing aircraft survivability against the increasing threat of sophisticated surface-to-air and air-to-air missiles, which may employ such features as next-generation electro-optics or dual IR and radio frequency seekers. AIRCМ currently consists of three efforts, the USAF/USN Advanced Strategic and Tactical IR Expendables (ASTE) program, USAF/USN AAR-47 software development and Loitering Electronic Warfare Killer (LEWK) ACTD. ASTE will provide advanced IR expendable countermeasures that will be functionally compatible with existing ALE-40, 45, and 47 dispenser systems and will be employed across multiple USAF weapon systems and the USN F/A-18 E/F. In addition, ASTE includes development of the Comet Pod that will dispense covert infrared countermeasures. This also explicitly includes any/all flare and decoy development that may be demanded or needed in current operations supporting the war on terrorism regardless of aircraft platform. These activities may also be paid for under platform specific funding. The AAR-47 software development supports two configurations of software intended to decrease the AAR-47 false alarm rate and improve threat detection for all large body aircraft. AAR-47 will also support engineering and testing efforts for missile warning identified by users. The Loitering Electronic Warfare Killer (LEWK) (ACTD) will demonstrate a long-endurance UAV for jamming and payload delivery. This ACTD was approved in FY01 and the USAF has been designated the lead service.</p> <p>(U) <u>FY 2002 (\$ in Thousands)</u></p> <p>(U) \$0 Accomplishments / Planned Program</p> <p>(U) \$0 LEWK ACTD Contract</p> <p>(U) \$0 Continue ASTE Flare Development</p> <p>(U) \$0 Continue COMET Pod Force Development</p> <p>(U) \$991 AAR-47 Software Development</p> <p>(U) \$991 Total</p> <p>(U) <u>FY 2003 (\$ in Thousands)</u></p> <p>(U) \$0 Accomplishments / Planned Program</p> <p>(U) \$5,195 LEWK ACTD Contract</p> <p>(U) \$2,203 Continue ASTE Flare Development</p> <p>(U) \$1,500 Continue COMET Pod Force Development</p>										
<div style="display: flex; justify-content: space-between;"> Project 3891 Page 8 of 28 Pages Exhibit R-2A (PE 0604270F) </div>										

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)								DATE February 2003		
BUDGET ACTIVITY				PE NUMBER AND TITLE				PROJECT		
05 - System Development and Demonstration (SDD)				0604270F EW Development				3891		
(U) <u>A. Mission Description Continued</u>										
(U) <u>FY 2003 (\$ in Thousands) Continued</u>										
(U) \$594 AAR-47 Software Development										
(U) \$9,492 Total										
(U) <u>FY 2004 (\$ in Thousands)</u>										
(U) \$0 Accomplishments / Planned Program										
(U) \$2,481 LEWK ACTD Contract										
(U) \$2,011 Continue ASTE Flare Development										
(U) \$0 Continue COMET Pod Force Development										
(U) \$961 AAR-47 Software Development										
(U) \$5,453 Total										
(U) <u>B. Project Change Summary</u>										
ASTE FY02 funding was transferred from PE64270F to fund higher Air Force priorities. Reprogrammed \$1.5M in FY03 to continue Comet Pod Force Development. Entire AAR-47 funding line was moved from project 653945 to this project as an administrative correction to the database. LEWK received a FY03 congressional add of \$3.2M.										
(U) <u>C. Other Program Funding Summary (\$ in Thousands)</u>										
	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Complete</u>	
(U) AF RDT&E										
(U) Other APPN										
(U) Procurement of Ammunition, AF, PE 28030F, 356010 Flares	11,666	24,321	31,841	32,259	30,036	31,246	123,440	125,120	Continuing	Continuing
(U) LEWK ACTD (OSD PE63750D)	5,000	1,000	1,000	500	0	0	0	0	Continuing	
(U) LEWK ACTD (USN PE0603502N)	0	1,000	1,000	0	0	0	0	0	Continuing	
(U) LEWK ACTD (US Army	0	1,000	1,000	0	0	0	0	0	Continuing	
Project 3891										

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE

February 2003

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

05 - System Development and Demonstration (SDD)

0604270F EW Development

3891

(U) **C. Other Program Funding Summary (\$ in Thousands)**

	<u>FY 2002</u> <u>Actual</u>	<u>FY 2003</u> <u>Estimate</u>	<u>FY 2004</u> <u>Estimate</u>	<u>FY 2005</u> <u>Estimate</u>	<u>FY 2006</u> <u>Estimate</u>	<u>FY 2007</u> <u>Estimate</u>	<u>FY 2008</u> <u>Estimate</u>	<u>FY 2009</u> <u>Estimate</u>	<u>Cost to</u> <u>Complete</u>	<u>Total Cost</u>
PE0603003)										
(U) LEWK ACTD (USMC	0	0	500	0	0	0	0	0	Continuing	
PE63640M)										

(U) **D. Acquisition Strategy**

The planned acquisition strategy for ASTE is competitive cost-plus.

AAR-47 activities are a time and materials contracted activity.

Comet pod testing is fixed price.

LEWK is an ACTD under OSD. Transition to USAF will be determined upon Military Utility Assessment in FY04.

(U) **E. Schedule Profile**

	<u>FY 2002</u>				<u>FY 2003</u>				<u>FY 2004</u>			
	1	2	3	4	1	2	3	4	1	2	3	4
(U) ASTE OT&E - Fighter		*										
(U) ASTE MS III - Fighter			*									
(U) ASTE DT&E-Transport								X				
(U) ASTE OT&E -Transport								X				
(U) ASTE Milestone III - Transport										X		
(U) ASTE DT&E/OT&E Follow-On Solution											X	
(U) AAR-47 Analyze Data (V21.2)					*							
(U) AAR-47 SW Development Contract (V22)		*										
(U) AAR-47 Collect/Validate Data (V22)						*						
(U) AAR-47 Collect/Validate Data (V22.x)							X					
(U) AAR-47 Modeling/Simulation							X					
(U) AAR-47 Algorithm Development								X				
(U) AAR-47 Software Development										X		
(U) AAR-47 Hardware testing											X	
(U) LEWK ACTD Retractable Wing development							X					

Project 3891

Page 10 of 28 Pages

Exhibit R-2A (PE 0604270F)

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE

February 2003

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

05 - System Development and Demonstration (SDD)

0604270F EW Development

3891

(U) E. Schedule Profile Continued

	<u>FY 2002</u>					<u>FY 2003</u>					<u>FY 2004</u>			
	1	2	3	4	1	2	3	4	1	2	3	4		
(U) LEWK ACTD Vehicle jammer downselect							X							

* - Denotes a completed event X - Denotes a planned event

UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)								DATE February 2003		
BUDGET ACTIVITY					PE NUMBER AND TITLE				PROJECT	
05 - System Development and Demonstration (SDD)					0604270F EW Development				3891	
(U) <u>A. Project Cost Breakdown (\$ in Thousands)</u>										
							FY 2002		FY 2003	FY 2004
(U)	ASTE Prime Contract Costs						0		710	584
(U)	ASTE Test & Evaluation						0		571	547
(U)	ASTE Verification & Validation						0		0	0
(U)	ASTE Modeling and Simulation						0		409	390
(U)	ASTE Mission Support						0		513	490
(U)	Comet Pod Force Development Evaluation Phase II						0		1,500	0
(U)	AAR-47 Modeling & Analysis						250		200	450
(U)	AAR-47 Algorithm Development / live fire testing / data collection						455		300	261
(U)	AAR-47 Correction of Deficiencies / software development / hardware testing						286		94	250
(U)	LEWK ACTD support						0		5,195	2,481
(U)	Total						991		9,492	5,453
(U) <u>B. Budget Acquisition History and Planning Information (\$ in Thousands)</u>										
(U) <u>Performing Organizations:</u>										
	<u>Contractor or</u>	<u>Contract</u>								
	<u>Government</u>	<u>Method/Type</u>	<u>Award or</u>	<u>Performing</u>	<u>Project</u>					
	<u>Performing</u>	<u>or Funding</u>	<u>Obligation</u>	<u>Activity</u>	<u>Office</u>	<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>
	<u>Activity</u>	<u>Vehicle</u>	<u>Date</u>	<u>EAC</u>	<u>EAC</u>	<u>to FY 2002</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>Complete</u>
	<u>Product Development Organizations</u>									
	ASTE - Development	CP	Oct 92	8,324	8,324	19,120	0	710	584	Continuing
	AAR-47 - GTRI (V22)	T&M	Various	0	0	949	991	294	700	Continuing
	Comet Pod FDE Phase I	Fixed Price	Mar 01	700	0	700	0	0	0	700
	<u>Support and Management Organizations</u>									
	ASTE M&S	PR	Various		2,554	1,609	0	409	390	Continuing
	ASTE V&V - Mac B	PR	Various		789	509	0	0	0	Continuing
	ASTE - Misc	Various	Various		Continuing	36,672	0	513	490	Continuing
	LEWK ACTD -	ACTD	Various		Continuing	0	0	5,195	2,481	Continuing
	MARSYSCOM									
Project 3891										
Page 12 of 28 Pages										
Exhibit R-3 (PE 0604270F)										

Project 3891

Page 12 of 28 Pages

Exhibit R-3 (PE 0604270F)

UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)								DATE February 2003	
BUDGET ACTIVITY				PE NUMBER AND TITLE				PROJECT	
05 - System Development and Demonstration (SDD)				0604270F EW Development				3891	
(U) <u>Performing Organizations Continued:</u>									
<u>Test and Evaluation Organizations</u>									
ASTE - 46TW	Various	Various	2,897	1,161	0	571	547	Continuing	TBD
ASTE - Misc	Various	Various	Continuing	282	0	0	0	Continuing	TBD
46TW/AFFTC/ Support	Various	Various	30,114	17,092	0	0	0	Continuing	TBD
AAR-47 Live Fire Test / Data Collection					0	300	261	Continuing	TBD
Comet Pod FDE Phase II					0	1,500	0	Continuing	TBD
			<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>	<u>Total</u>
<u>Subtotals</u>			<u>to FY 2002</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>Complete</u>	<u>Program</u>	
Subtotal Product Development			20,769	991	1,004	1,284	TBD	TBD	
Subtotal Support and Management			38,790	0	6,117	3,361	TBD	TBD	
Subtotal Test and Evaluation			18,535	0	2,371	808	TBD	TBD	
Total Project			78,094	991	9,492	5,453	TBD	TBD	

Project 3891

Page 13 of 28 Pages

Exhibit R-3 (PE 0604270F)

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)									DATE February 2003												
BUDGET ACTIVITY 05 - System Development and Demonstration (SDD)					PE NUMBER AND TITLE 0604270F EW Development					PROJECT 3945											
COST (\$ in Thousands)		FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost										
3945	TEWS Upgrade	33,660	29,550	42,149	39,460	32,766	33,330	30,932	31,341	Continuing	TBD										
<p>* This program is being restructured to accomodate the cancellation of the B-1B Defensive System Upgrade Program (DSUP) and the FY03 Congressional Reduction of \$8.7M. In FY2003, BPAC 653945, RF Towed Decoy Systems, was renamed TEWS Upgrade.</p> <p>(U) <u>A. Mission Description</u></p> <p>The majority of this program develops, integrates, and fields the AN/ALQ-135 Tactical Electronic Warfare System (TEWS) to be used internally on 438 F-15 C/E aircraft. In addition, it provides for Air Force participation/cost share in the Navy-led Integrated Defensive Electronic Countermeasures (IDECM) program to jointly develop a Fiber Optic Towed Decoy (FOTD) for the F-15C/E and F/A-18E/F. The Air Force will integrate the FOTD with the AN/ALQ-135 on the F-15C/E and provide for Air Force unique development, integration and testing of the FOTD that is not covered by the Navy-led joint development effort. The Air Force also participates in techniques generator and FOTD risk reduction efforts. FY04 will start the integration of the decoy on the ALQ-135 for the F-15 C/E aircraft.</p> <p>The AN/ALQ-135 on-board system improves Electronic Countermeasure performance against Tier 1 threat systems, improves system reliability, and replaces a multitude of obsolete subsystems. The RF towed decoy is a low cost RF countermeasure that increases survivability as a supplement to the TEWS capability against monopulse, semi-active, and active RF missile threats during the terminal portion of an engagement.</p> <p>*A minor part of the TEWS program is flight testing the FOTD and its variants on the B-1B in conjunction with the B1-B DSUP program. The TEWS program is being restructured to address the cancellation of B-1B DSUP & the FY03 congressional reduction of \$8.7M.</p> <p>(U) <u>FY 2002 (\$ in Thousands)</u></p> <table style="width: 100%;"> <tr> <td style="width: 10%;">(U) \$0</td> <td>Accomplishments/Planned Program</td> </tr> <tr> <td>(U) \$6,363</td> <td>IDECM Common</td> </tr> <tr> <td>(U) \$25,319</td> <td>F-15 (ALQ-135, FOTD, Flight Test)</td> </tr> <tr> <td>(U) \$1,978</td> <td>Mission and Test Support</td> </tr> <tr> <td>(U) \$33,660</td> <td>Total</td> </tr> </table>												(U) \$0	Accomplishments/Planned Program	(U) \$6,363	IDECM Common	(U) \$25,319	F-15 (ALQ-135, FOTD, Flight Test)	(U) \$1,978	Mission and Test Support	(U) \$33,660	Total
(U) \$0	Accomplishments/Planned Program																				
(U) \$6,363	IDECM Common																				
(U) \$25,319	F-15 (ALQ-135, FOTD, Flight Test)																				
(U) \$1,978	Mission and Test Support																				
(U) \$33,660	Total																				
Project 3945		Page 14 of 28 Pages					Exhibit R-2A (PE 0604270F)														

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)								DATE February 2003																																																																																							
BUDGET ACTIVITY					PE NUMBER AND TITLE			PROJECT																																																																																							
05 - System Development and Demonstration (SDD)					0604270F EW Development			3945																																																																																							
<p>(U) <u>A. Mission Description Continued</u></p> <p>(U) <u>FY 2003 (\$ in Thousands)</u></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">(U) \$0</td> <td>Accomplishments/Planned Program</td> </tr> <tr> <td>(U) \$3,780</td> <td>IDECM Common</td> </tr> <tr> <td>(U) \$23,048</td> <td>F-15 (ALQ-135, FOTD, Flight Test)</td> </tr> <tr> <td>(U) \$2,722</td> <td>Mission and Test Support</td> </tr> <tr> <td>(U) \$29,550</td> <td>Total</td> </tr> </table> <p>(U) <u>FY 2004 (\$ in Thousands)</u></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">(U) \$0</td> <td>Accomplishments/Planned Program</td> </tr> <tr> <td>(U) \$2,700</td> <td>IDECM Common</td> </tr> <tr> <td>(U) \$36,024</td> <td>F-15 (ALQ-135, FOTD, Flight Test)</td> </tr> <tr> <td>(U) \$3,425</td> <td>Mission and Test Support</td> </tr> <tr> <td>(U) \$42,149</td> <td>Total</td> </tr> </table> <p>(U) <u>B. Project Change Summary</u></p> <p>This program is being restructured due to the cancellation of the B-1B DSUP and the FY03 congressional reduction of \$8.7M. Additional reductions include FY03 congressional rescission of \$0.736M, \$1.1M moved to JSECST, and \$1.5M moved to AIRCM to continue Comet testing.</p> <p>* Database correction (all years) moved AAR-47 from TEWS Upgrade to AIRCM.</p> <p>(U) <u>C. Other Program Funding Summary (\$ in Thousands)</u></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 25%;"></th> <th style="width: 5%;"><u>FY 2002</u></th> <th style="width: 5%;"><u>FY 2003</u></th> <th style="width: 5%;"><u>FY 2004</u></th> <th style="width: 5%;"><u>FY 2005</u></th> <th style="width: 5%;"><u>FY 2006</u></th> <th style="width: 5%;"><u>FY 2007</u></th> <th style="width: 5%;"><u>FY 2008</u></th> <th style="width: 5%;"><u>FY 2009</u></th> <th style="width: 10%;"><u>Cost to</u></th> <th style="width: 10%;"><u>Total Cost</u></th> </tr> <tr> <th></th> <th><u>Actual</u></th> <th><u>Estimate</u></th> <th><u>Estimate</u></th> <th><u>Estimate</u></th> <th><u>Estimate</u></th> <th><u>Estimate</u></th> <th><u>Estimate</u></th> <th><u>Estimate</u></th> <th><u>Complete</u></th> <th></th> </tr> </thead> <tbody> <tr> <td>(U) AF RDT&E</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>(U) Other APPN</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td></td> <td></td> </tr> <tr> <td>(U) Aircraft Procurement, AF PE 027442F, War Consumable (RF towed decoys)</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">24,624</td> <td style="text-align: center;">25,460</td> <td style="text-align: center;">29,068</td> <td style="text-align: center;">29,590</td> <td style="text-align: center;">Continuing</td> <td style="text-align: center;">Continuing</td> </tr> <tr> <td>(U) Aircraft Procurement, AF PE</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">250</td> <td style="text-align: center;">795</td> <td style="text-align: center;">770</td> <td style="text-align: center;">865</td> <td style="text-align: center;">Continuing</td> <td style="text-align: center;">Continuing</td> </tr> </tbody> </table>										(U) \$0	Accomplishments/Planned Program	(U) \$3,780	IDECM Common	(U) \$23,048	F-15 (ALQ-135, FOTD, Flight Test)	(U) \$2,722	Mission and Test Support	(U) \$29,550	Total	(U) \$0	Accomplishments/Planned Program	(U) \$2,700	IDECM Common	(U) \$36,024	F-15 (ALQ-135, FOTD, Flight Test)	(U) \$3,425	Mission and Test Support	(U) \$42,149	Total		<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>Cost to</u>	<u>Total Cost</u>		<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Complete</u>		(U) AF RDT&E											(U) Other APPN	0	0	0	0	0	0	0	0			(U) Aircraft Procurement, AF PE 027442F, War Consumable (RF towed decoys)	0	0	0	0	24,624	25,460	29,068	29,590	Continuing	Continuing	(U) Aircraft Procurement, AF PE	0	0	0	0	250	795	770	865	Continuing	Continuing
(U) \$0	Accomplishments/Planned Program																																																																																														
(U) \$3,780	IDECM Common																																																																																														
(U) \$23,048	F-15 (ALQ-135, FOTD, Flight Test)																																																																																														
(U) \$2,722	Mission and Test Support																																																																																														
(U) \$29,550	Total																																																																																														
(U) \$0	Accomplishments/Planned Program																																																																																														
(U) \$2,700	IDECM Common																																																																																														
(U) \$36,024	F-15 (ALQ-135, FOTD, Flight Test)																																																																																														
(U) \$3,425	Mission and Test Support																																																																																														
(U) \$42,149	Total																																																																																														
	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>Cost to</u>	<u>Total Cost</u>																																																																																					
	<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Complete</u>																																																																																						
(U) AF RDT&E																																																																																															
(U) Other APPN	0	0	0	0	0	0	0	0																																																																																							
(U) Aircraft Procurement, AF PE 027442F, War Consumable (RF towed decoys)	0	0	0	0	24,624	25,460	29,068	29,590	Continuing	Continuing																																																																																					
(U) Aircraft Procurement, AF PE	0	0	0	0	250	795	770	865	Continuing	Continuing																																																																																					
Project 3945					Page 15 of 28 Pages			Exhibit R-2A (PE 0604270F)																																																																																							

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE

February 2003

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

05 - System Development and Demonstration (SDD)

0604270F EW Development

3945

(U) **C. Other Program Funding Summary (\$ in Thousands)**

	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Complete</u>	
027442F, Initial Spares										
(U) Aircraft Procurement, AF	0	0	0	0	0	0	0	0	Continuing	Continuing
PE 027442F, Mods (B-1B)										
(U) Aircraft Procurement, AF	0	0	0	0	21,277	21,743	22,330	22,673	Continuing	Continuing
PE 027442F, Mods (F-15)										

(U) **D. Acquisition Strategy**

The acquisition strategy for IDECM RDT&E was competitive, cost-plus incentive fee /award fee. The production contract is intended to be sole source for first two lots with full and open competition in lots three and beyond.

(U) **E. Schedule Profile**

	<u>FY 2002</u>				<u>FY 2003</u>				<u>FY 2004</u>			
	1	2	3	4	1	2	3	4	1	2	3	4
(U) B-1B Defensive Systems Upgrade Program (DSUP) Risk Reduction				*								
(U) B-1 DSUP Flight Test Readiness Review (FTRR)				*								
(U) B-1B DSUP Developmental T&E (canceled)												
(U) B-1B DSUP Operational T&E (1Q05) - (canceled)												
(U) F-15 ALQ-135 Techniques Generator Critical Design Review (CDR)				*								
(U) F-15 FOTD CDR (Software)				*								
(U) F-15 FOTD Thermal Survey Flight Test						X						
(U) F-15 FOTD (ALE-55, FO-50) Aero Demo flight test, Phases 2 & 3							X			X		
(U) A/C Integ ALQ-135 Upgrade (Enters Suite 5)								X				
(U) ALQ-135 (Suite 5 DT&E)									X			
(U) 1x4 DCL SCA functional configuration audit				*								

Note: F-15 FOTD decoy testing (F-15 FTRR & F-15/FOTD DT&E) moved to FY06 as part of program restructure.

* - Denotes a completed event

X - Denotes a planned event

Project 3945

Page 16 of 28 Pages

Exhibit R-2A (PE 0604270F)

UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)								DATE February 2003		
BUDGET ACTIVITY				PE NUMBER AND TITLE				PROJECT		
05 - System Development and Demonstration (SDD)				0604270F EW Development				3945		
(U) A. Project Cost Breakdown (\$ in Thousands)										
							<u>FY 2002</u>	<u>FY 2003</u>		<u>FY 2004</u>
(U)	Integrated Defensive Electronic Countermeasures (IDECM) Common						6,363	3,780		2,700
(U)	F-15 (ALQ-135, FOTD, Flight Test)						25,319	23,048		36,024
(U)	Mission and Test Support						1,978	2,722		3,425
(U)	Total						33,660	29,550		42,149
(U) B. Budget Acquisition History and Planning Information (\$ in Thousands)										
(U) Performing Organizations:										
<u>Contractor or</u>	<u>Contract</u>									
<u>Government</u>	<u>Method/Type</u>	<u>Award or</u>	<u>Performing</u>	<u>Project</u>						
<u>Performing</u>	<u>or Funding</u>	<u>Obligation</u>	<u>Activity</u>	<u>Office</u>	<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>	<u>Total</u>
<u>Activity</u>	<u>Vehicle</u>	<u>Date</u>	<u>EAC</u>	<u>EAC</u>	<u>to FY 2002</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>Complete</u>	<u>Program</u>
<u>Product Development Organizations</u>										
USAF IDECM: Development	CPAF	Nov 95	51,706	51,706	47,226	980	2,100	0	Continuing	TBD
BAE										
Development Raytheon	CPIF	Jan 96	17,722	17,722	17,722	0	0	0	Continuing	TBD
F-15 IDECM Integration-	CPFF	Aug 97	177,516	177,516	34,128	23,440	20,410	28,689	Continuing	TBD
Boeing/LMT/Northrop										
USAF IDECM: Development	CPFF	Feb 01	14,353	14,353	1,167	1,386	432	2,160	Continuing	TBD
BAE										
Raytheon Development	CPFF	Nov 01	11,788	11,788	0	3,099	963	1,130	Continuing	TBD
IDECM Misc Development	Various		20,055	20,055	3,191	418	2,340	7,230	Continuing	TBD
Contracts (IMPLC/Alt.										
Strategy/Flt Test Assets)										
<u>Support and Management Organizations</u>										
ASC/AA - IDECM	Various	As required	N/A		3,102	4,207	1,440	1,540	Continuing	TBD

UNCLASSIFIED

UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)						DATE February 2003		
BUDGET ACTIVITY			PE NUMBER AND TITLE				PROJECT	
05 - System Development and Demonstration (SDD)			0604270F EW Development				3945	
(U) <u>Performing Organizations Continued:</u>								
<u>Test and Evaluation Organizations</u>								
AFOTEC	N/A	1,600	0	0	0	Continuing	TBD	
Flight Test Support	N/A	156	0	0	0	Continuing	TBD	
Eglin Flight Test Support	N/A	845	55	1,380	1,400	Continuing	TBD	
Naval Research Lab (NRL)	N/A	0	75	485	0	Continuing	TBD	
		<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>	<u>Total</u>	
<u>Subtotals</u>		<u>to FY 2002</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>Complete</u>	<u>Program</u>	
Subtotal Product Development		103,434	29,323	26,245	39,209	TBD	TBD	
Subtotal Support and Management		3,102	4,207	1,440	1,540	TBD	TBD	
Subtotal Test and Evaluation		2,601	130	1,865	1,400	TBD	TBD	
Total Project		109,137	33,660	29,550	42,149	TBD	TBD	

Project 3945

Page 18 of 28 Pages

Exhibit R-3 (PE 0604270F)

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE

February 2003

BUDGET ACTIVITY

05 - System Development and Demonstration (SDD)

PE NUMBER AND TITLE

0604270F EW Development

PROJECT

4832

COST (\$ in Thousands)	FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
4832 Precision Location and Identification (PLAID)	5,329	20,088	0	0	0	0	0	0	0	52,966

(U) **A. Mission Description**

Precision Location and Identification (PLAID) will improve aircrew situational awareness by providing accurate ground emitter location and unambiguous identification. Threat systems can disrupt or negate operational missions, even without firing, by requiring aircrew reactions that affect mission objectives. Improved threat information from a modernized Radar Warning Receiver (RWR) will assist the aircrews in determining precise threat range/directions and provide option responses short of mission abort or violent aircraft maneuvering. Knowing threat location will help an aircrew respond 'real-time' to threats by providing accurate information to allow the aircrews to reroute around hostile areas. PLAID will, where feasible, utilize existing aircraft RWR antennas and wiring (Group A hardware). Some modifications may be necessary to optimize geolocation performance and minimize electromagnetic interference. PLAID development is currently focused on the ALR-69 RWR but PLAID technology can also be applied to other RWRs. Additional related enhancements to provide the capability to pass ground emitter target data (location, type, ID) to other systems are under consideration.

(U) **FY 2002 (\$ in Thousands)**

(U) \$0 Accomplishments/Planned Program
 (U) \$1,057 Program Office Support
 (U) \$318 System Engineering Support
 (U) \$249 SOF C-130 SPD Support
 (U) \$3,705 Initiation of Contract Options 2 & 4 (geolocation risk reduction and SOF geolocation and Specific Emitter ID algorithm development)
 (U) \$5,329 Total

(U) **FY 2003 (\$ in Thousands)**

(U) \$0 Accomplishments/Planned Program
 (U) \$7,323 Core EMD, hardware/software design/development/test (including \$1,021K Award Fee)
 (U) \$6,759 SDD risk reduction and geolocation options, hardware/software design/development/test (including \$248K award fee)
 (U) \$900 Program Office Support
 (U) \$1,887 SOF C-130 SPD Support (Boeing Ft Walton Beach)
 (U) \$1,350 System Engineering Support
 (U) \$1,869 SOF C-130 DT&E/OT&E
 (U) \$20,088 Total

Project 4832

Page 19 of 28 Pages

Exhibit R-2A (PE 0604270F)

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE

February 2003

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

05 - System Development and Demonstration (SDD)**0604270F EW Development****4832**(U) **A. Mission Description Continued**(U) FY 2004 (\$ in Thousands)

(U) \$0 Accomplishments/Planned Program

(U) \$0 Total

(U) **B. Project Change Summary**

In FY03 Congress added 10M to provide the capability to pass ground emitter target location to other systems and to provide for additional risk reduction activities.

(U) **C. Other Program Funding Summary (\$ in Thousands)**

	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Complete</u>	
(U) PE27442F Common ECM Equipment			9,698	10,243	10,896	11,240	11,560	11,721	Continuing	
(U) PE41115F ALR-69 (RWR) AMC C-130 Airlift Squadrons. PLAID procurement to commence in FY04		15,635	19,465	14,436	33,628	32,967	36,704	36,392	Continuing	

(U) **D. Acquisition Strategy**

Acquisition was accomplished through full and open competition. The SDD contract was awarded to Raytheon Corporation in August 2001.

Program is based on 'Evolutionary Acquisition Strategy'.

- CORE SDD: SOF-130 DT/OT (addresses 3 of 4 KPPs)
- Option 1: F-16 DT/OT
- Option 2: Risk Reduction
- Option 3: F-16 Geo-Location and SEI (4th KPP)
- Option 4: SOF-130 Geo-Location & SEI (4th KPP)
- Options 5-10: Production
- Option 11: Add Multi-ship Geo-Location Capability

(U) **E. Schedule Profile**FY 2002FY 2003FY 2004

Project 4832

Page 20 of 28 Pages

Exhibit R-2A (PE 0604270F)

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)										DATE February 2003		
BUDGET ACTIVITY					PE NUMBER AND TITLE					PROJECT		
05 - System Development and Demonstration (SDD)					0604270F EW Development					4832		
(U) <u>E. Schedule Profile Continued</u>												
					<u>FY 2002</u>				<u>FY 2003</u>			
					1	2	3	4	1	2	3	4
						*			*			
(U) Design Reviews (PDR/CDR)												
(U) Integrated Defensive Avionics Lab										X		
(U) Test Readiness Review											X	
(U) C-130 Combined Development/Operational Test and Evaluation Start											X	
* - Denotes a completed event												
X - Denotes a planned event												
<p>DT/OT delayed from fourth quarter FY03 to second quarter FY04 because of aircraft availability for flight testing. FY04 RDT&E activities will be funded from FY03 budget.</p>												

Project 4832
Page 21 of 28 Pages
Exhibit R-2A (PE 0604270F)

UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)								DATE February 2003			
BUDGET ACTIVITY					PE NUMBER AND TITLE				PROJECT		
05 - System Development and Demonstration (SDD)					0604270F EW Development				4832		
(U) <u>A. Project Cost Breakdown (\$ in Thousands)</u>											
					<u>FY 2002</u>		<u>FY 2003</u>		<u>FY 2004</u>		
(U) Program Office Support					1,057		900				
(U) SOF C-130 Testing					0		1,869				
(U) SOF C-130 SPD Support (Boeing Fort Walton Beach, FL)					249		1,887				
(U) System Engineering Support					318		1,350				
(U) 'Core' Engineering and Manufacturing Development, Hardware/Software design/development/test					0		7,323				
(U) SDD 'Options', hardware/software design/development/test					3,705		6,759				
(U) Total					5,329		20,088				
Increase in funding requirement is due to exercise of Options 2 and 4.											
(U) <u>B. Budget Acquisition History and Planning Information (\$ in Thousands)</u>											
(U) <u>Performing Organizations:</u>											
<u>Contractor or Government</u>		<u>Contract Method/Type or Funding Vehicle</u>	<u>Award or Obligation Date</u>	<u>Performing Activity EAC</u>	<u>Project Office EAC</u>	<u>Total Prior to FY 2002</u>	<u>Budget FY 2002</u>	<u>Budget FY 2003</u>	<u>Budget FY 2004</u>	<u>Budget to Complete</u>	<u>Total Program</u>
<u>Product Development Organizations</u>											
WR-ALC/LNRC/Raytheon		Full and open competition/CPAF	August 01	TBD	TBD	23,436	0	6,054		0	29,490
WR-ALC/LN/Raytheon		Award Fee			TBD	1,005		1,269			2,274
WR-ALC/LN/Raytheon		SDD Options			TBD		3,705	6,759			10,464
Survivability Enhancement Organizations		WR-ALC/LN for ALR-56C processor upgrade; ASC/AAN for Comet Pod	May 01	TBD	TBD	2,500	0	0		0	2,500
Project 4832											
Page 22 of 28 Pages											
Exhibit R-3 (PE 0604270F)											

UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)								DATE February 2003	
BUDGET ACTIVITY				PE NUMBER AND TITLE				PROJECT	
05 - System Development and Demonstration (SDD)				0604270F EW Development				4832	
(U) <u>Performing Organizations Continued:</u>									
<u>Support and Management Organizations</u>									
Engineering Services	616	Mar 01	TBD	TBD	225	318	1,350	0	1,893
Program Office Support/LN-1 PR		Sep 01	TBD	TBD	313	697	900	0	1,910
SOF C-130 SPD (Boeing Fort PR Walton Beach, FL)		Feb 02	TBD	TBD	0	249	1,887	0	2,136
<u>Test and Evaluation Organizations</u>									
Nellis Test Range	TBD	TBD	TBD	TBD	0	125	129	0	254
Eglin Test Range	PO	01 MAY 02	TBD	TBD	70	235	750	0	1,055
Lab Testing	616	TBD	TBD	TBD			870		870
AFOTEC	616	TBD	TBD	TBD			120		120
(U) <u>Government Furnished Property:</u>									
<u>Contract</u>									
<u>Method/Type</u>									
<u>Award or</u>									
<u>Item</u>	<u>or Funding</u>	<u>Obligation</u>	<u>Delivery</u>		<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>
<u>Description</u>	<u>Vehicle</u>	<u>Date</u>	<u>Date</u>		<u>to FY 2002</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>Complete</u>
<u>Product Development Property</u>									
<u>Support and Management Property</u>									
<u>Test and Evaluation Property</u>									
					<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>
					<u>to FY 2002</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>Complete</u>
<u>Subtotals</u>									
Subtotal Product Development					26,941	3,705	14,082	0	44,728
Subtotal Support and Management					538	1,264	4,137	0	5,939
Subtotal Test and Evaluation					70	360	1,869	0	2,299
Total Project					27,549	5,329	20,088	0	52,966

Project 4832

Page 23 of 28 Pages

Exhibit R-3 (PE 0604270F)

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE

February 2003

BUDGET ACTIVITY

05 - System Development and Demonstration (SDD)

PE NUMBER AND TITLE

0604270F EW Development

PROJECT

8462

COST (\$ in Thousands)	FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
8462 Airborne Electronic Attack	1,337	5,300	26,432	0	0	145,135	105,596	70,878	Continuing	TBD

In FY 2003, Project 658462, MALD, was changed to Airborne Electronic Attack (AEA) in order to accurately reflect the initiatives under this project.

(U) **A. Mission Description**

This project develops critical electronic attack capabilities in support of Air Force and joint operations to include Global Strike Task Force (GSTF). The primary capability in this project is the Miniature Air Launched Decoy (MALD). MALD is a low-cost decoy to stimulate enemy integrated air defense systems (IADS) for detection, location, and both lethal and non-lethal suppression activities. MALD began as A DARPA - led, USAF sponsored ACTD with a planned 'Silver Bullet' buy of 150 systems. In order to fully mature the technology, the 'Silver Bullet' buy was canceled and the ACTD transitioned to a formal SDD effort managed by the AF. In June 02, SECAF & CSAF endorsed MALD as a robust development program to support the GSTF. Air Launched Vehicle Investigation (ALVIN) study contracts were completed FY02 providing initial design development, analysis and evaluation which led to an approved acquisition strategy. In FY03, MALD enters into the SDD phase with the milestone B decision and a competitive SDD Contract award.

Beginning in FY07, the USAF AEA initiative expands its scope to develop the other crucial stand-off and stand-in capabilities necessary to give the Joint Forces Air Component Commander (JFACC) a flexible array of tools to cover the entire threat spectrum.

(U) **FY 2002 (\$ in Thousands)**

(U) \$0 Accomplishments / Planned Program
 (U) \$1,337 Preparation for SDD / ALVIN
 (U) \$1,337 Total

(U) **FY 2003 (\$ in Thousands)**

(U) \$0 Accomplishments / Planned Program
 (U) \$5,300 Preparation for SDD and SDD Contract Award
 (U) \$5,300 Total

Project 8462

Page 24 of 28 Pages

Exhibit R-2A (PE 0604270F)

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE

February 2003

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

05 - System Development and Demonstration (SDD)**0604270F EW Development****8462**(U) **A. Mission Description Continued**(U) FY 2004 (\$ in Thousands)

(U) \$0 Accomplishments / Planned Program

(U) \$20,224 SDD Contract

(U) \$3,846 Program Office Support (Government)

(U) \$2,025 B-52 Aircraft Integration

(U) \$105 Government Test Planning

(U) \$232 F-16 Aircraft Integration

(U) \$26,432 Total

(U) **B. Project Change Summary**

Below Threshold Reprogramming add of \$1.3M FY02 for ALVIN studies.

FY04 \$26.4M increase to MALD for SDD.

(U) **C. Other Program Funding Summary (\$ in Thousands)**

	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Complete</u>	
(U) AF RDT&E										
(U) Other APPN (PE 27442F)							42,727	81,007		

MALD production funding anticipated to begin in FY07.

Production funding for other AEA initiatives begins in FY08.

(U) **D. Acquisition Strategy**

In FY03, a full and open competition will be conducted, resulting in award of a SDD contract in FY03.

(U) **E. Schedule Profile**FY 2002FY 2003FY 2004

Project 8462

Page 25 of 28 Pages

Exhibit R-2A (PE 0604270F)

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE

February 2003

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

05 - System Development and Demonstration (SDD)

0604270F EW Development

8462

(U) E. Schedule Profile Continued

	<u>FY 2002</u>					<u>FY 2003</u>					<u>FY 2004</u>			
	1	2	3	4	1	2	3	4	1	2	3	4		
(U) ALVIN Contract Award			*											
(U) ALVIN mid-term reviews				*										
(U) ALVIN submissions				*										
(U) SDD contract award								X						

*-Denotes a completed event

X-Denotes a planned event

UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE February 2003			
BUDGET ACTIVITY					PE NUMBER AND TITLE				PROJECT	
05 - System Development and Demonstration (SDD)					0604270F EW Development				8462	
(U) <u>A. Project Cost Breakdown (\$ in Thousands)</u>										
					<u>FY 2002</u>		<u>FY 2003</u>		<u>FY 2004</u>	
(U) Preparation for SDD					1,337		1,500			
(U) SDD Contract							3,800		20,224	
(U) SPO Support									3,846	
(U) B-52 Integration									2,025	
(U) F-16 Integration									232	
(U) Government Test Planning									105	
(U) Total					1,337		5,300		26,432	
(U) <u>B. Budget Acquisition History and Planning Information (\$ in Thousands)</u>										
(U) <u>Performing Organizations:</u>										
<u>Contractor or</u>		<u>Contract</u>								
<u>Government</u>	<u>Method/Type</u>	<u>Award or</u>	<u>Performing</u>	<u>Project</u>						
<u>Performing</u>	<u>or Funding</u>	<u>Obligation</u>	<u>Activity</u>	<u>Office</u>	<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>	<u>Total</u>
<u>Activity</u>	<u>Vehicle</u>	<u>Date</u>	<u>EAC</u>	<u>EAC</u>	<u>to FY 2002</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>Complete</u>	<u>Program</u>
<u>Product Development Organizations</u>										
SDD Contractor TBD		CPAF	May 03	TBD	TBD	39,872	1,157	3,800	20,224	Continuing TBD
B-52 Aircraft Integration						0	0	285	2,025	Continuing TBD
F-16 Aircraft Integration						0	0	200	232	Continuing TBD
<u>Support and Management Organizations</u>										
AAC/WMGM						5,111	180	965	3,846	Continuing TBD
<u>Test and Evaluation Organizations</u>										
Eglin AFB-Test Planning						4,500	0	50	105	Continuing TBD
(U) <u>Government Furnished Property:</u>										
		<u>Contract</u>								
	<u>Method/Type</u>	<u>Award or</u>								
<u>Item</u>	<u>or Funding</u>	<u>Obligation</u>	<u>Delivery</u>		<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>	<u>Total</u>
<u>Description</u>	<u>Vehicle</u>	<u>Date</u>	<u>Date</u>		<u>to FY 2002</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>Complete</u>	<u>Program</u>
<u>Product Development Property</u>										
Project 8462										
Page 27 of 28 Pages										
Exhibit R-3 (PE 0604270F)										

UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)

DATE

February 2003

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

05 - System Development and Demonstration (SDD)

0604270F EW Development

8462

(U) Government Furnished Property Continued:Support and Management PropertyTest and Evaluation Property

	<u>Total Prior</u> <u>to FY 2002</u>	<u>Budget</u> <u>FY 2002</u>	<u>Budget</u> <u>FY 2003</u>	<u>Budget</u> <u>FY 2004</u>	<u>Budget to</u> <u>Complete</u>	<u>Total</u> <u>Program</u>
<u>Subtotals</u>						
Subtotal Product Development	39,872	1,157	4,285	22,481	TBD	TBD
Subtotal Support and Management	5,111	180	965	3,846	TBD	TBD
Subtotal Test and Evaluation	4,500	0	50	105	TBD	TBD
Total Project	49,483	1,337	5,300	26,432	TBD	TBD